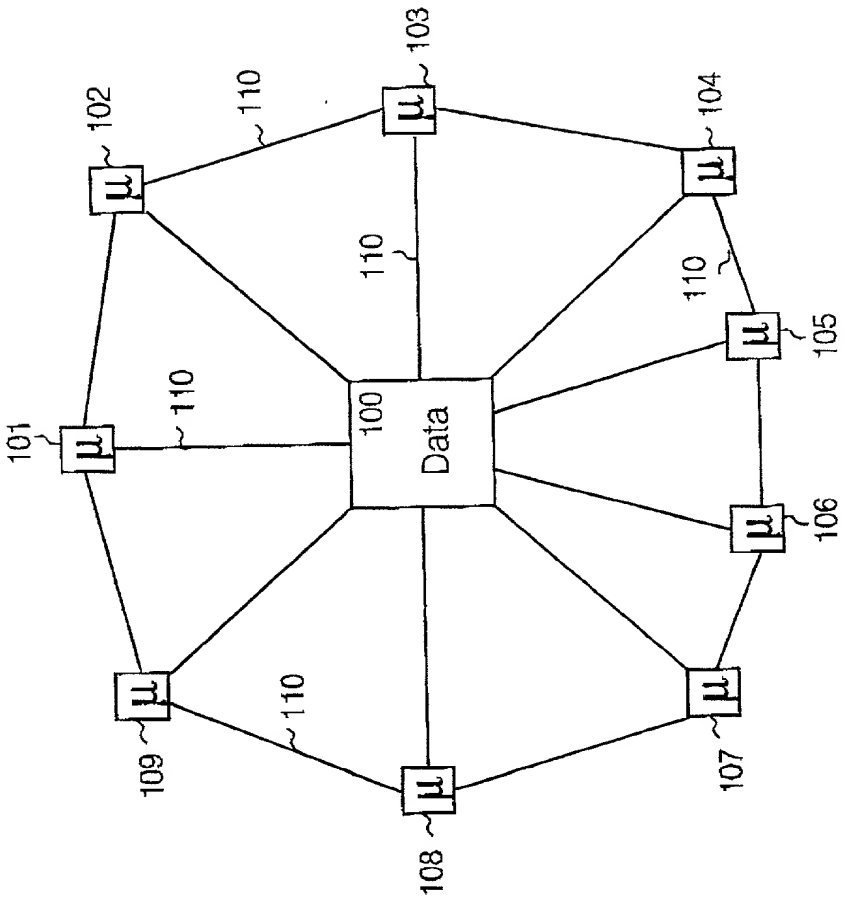

Fig. 1
(prior art)

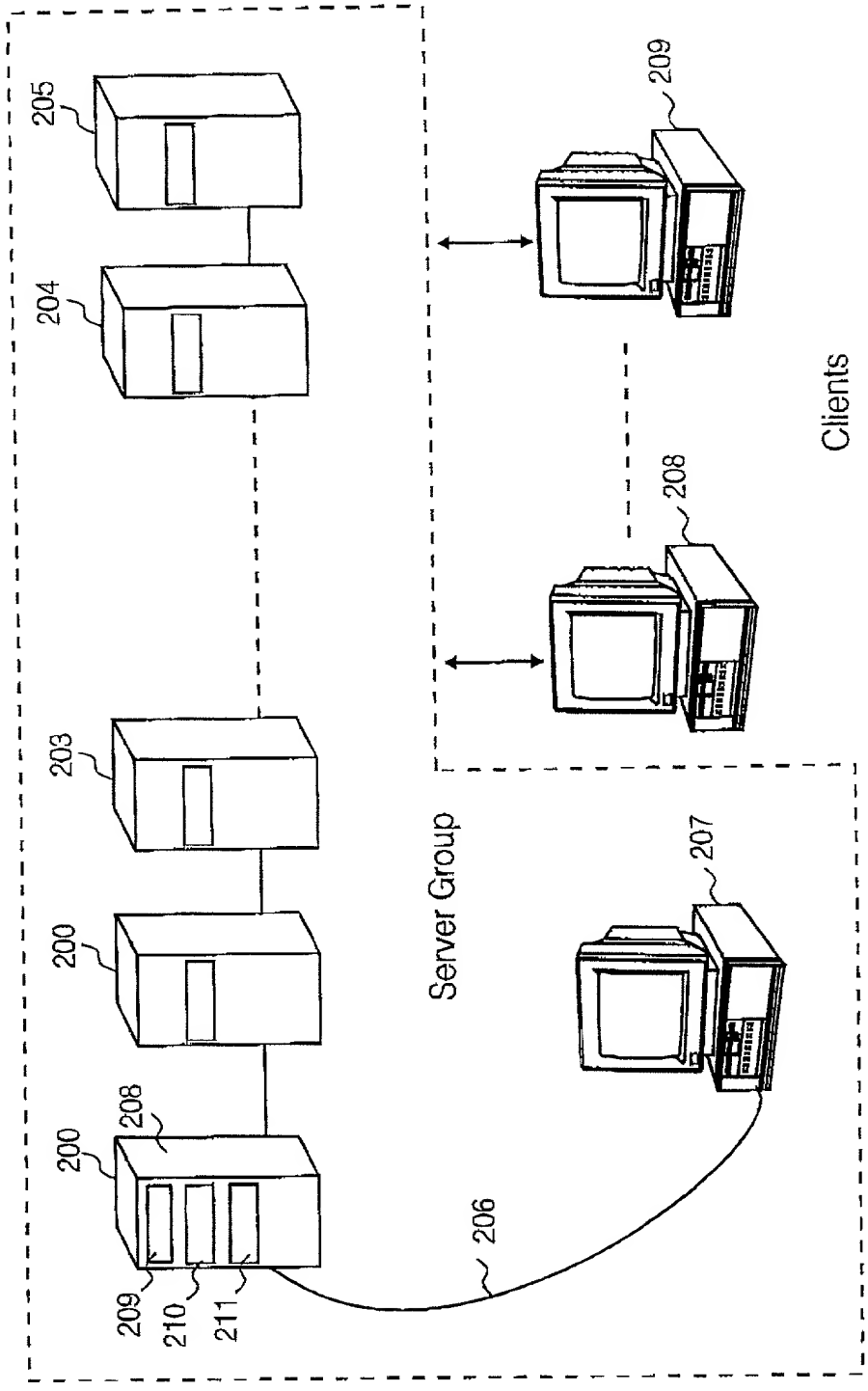
205
204
203
200
200
208
209
210
211
206
Server Group
207
209
208
Clients

Fig. 2

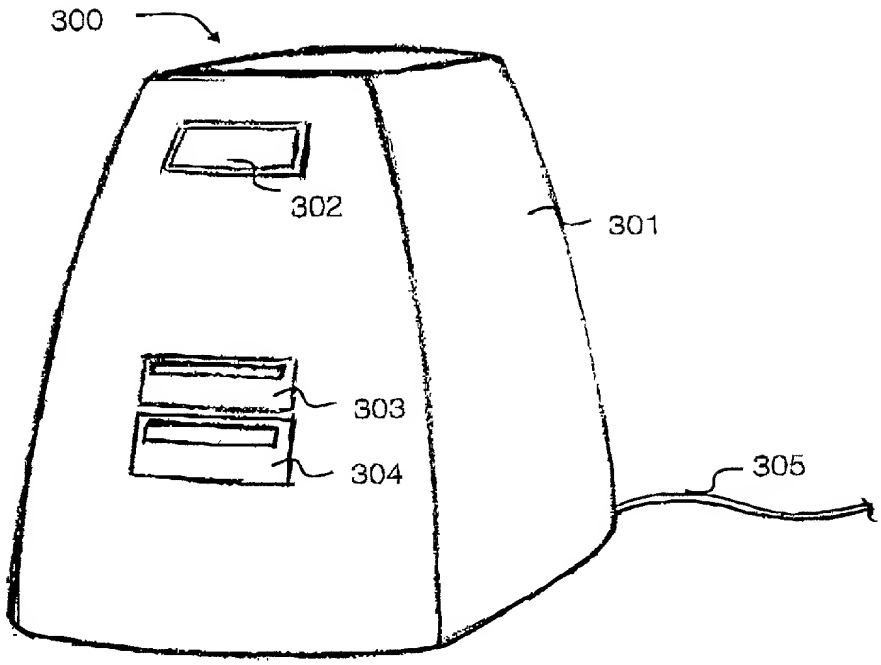

Fig. 3

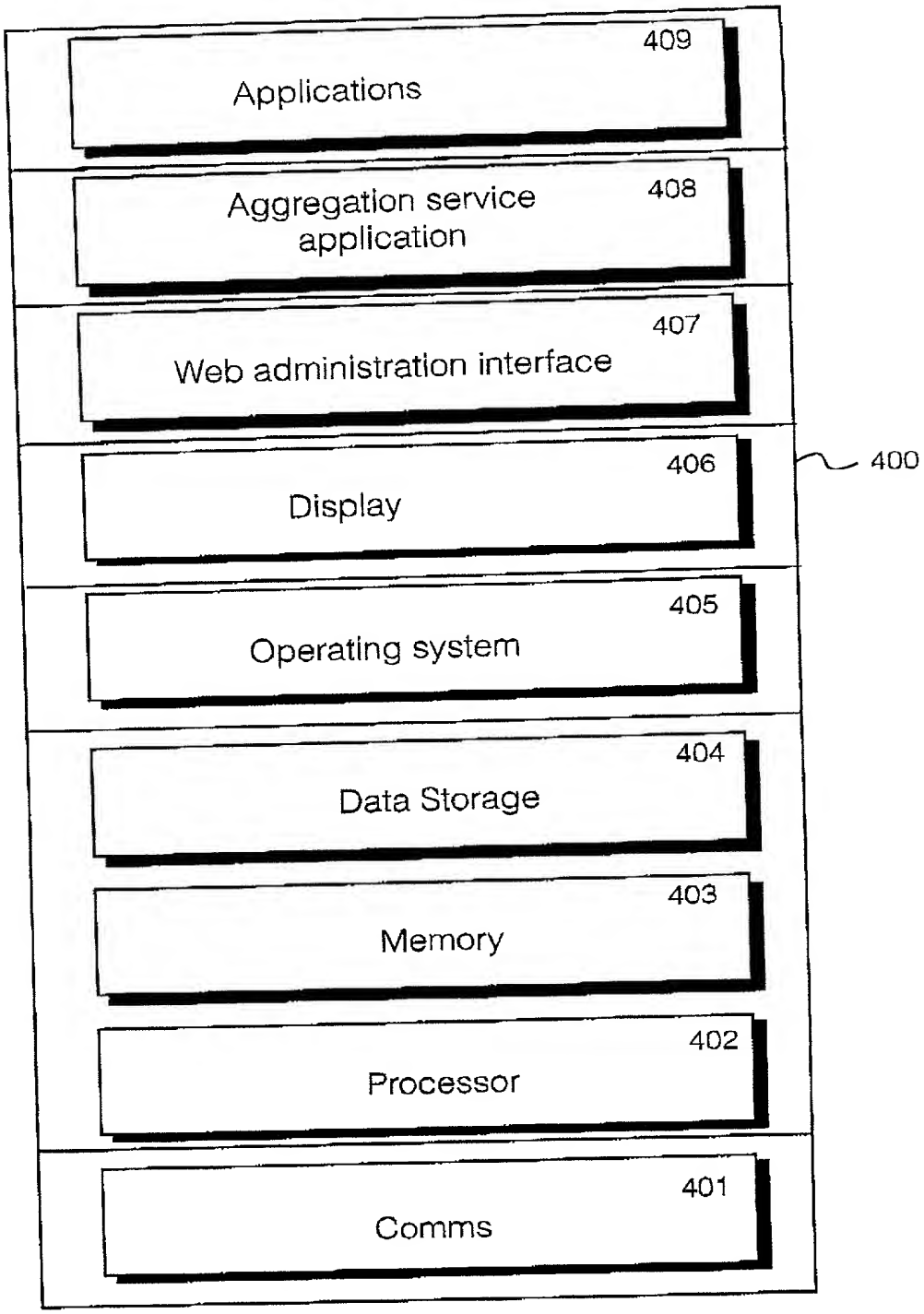
409
Applications
408
Aggregation service application
407
Web administration interface
406
Display
405
Operating system
404
Data Storage
403
Memory
402
Processor
401
Comms
400

Fig. 4

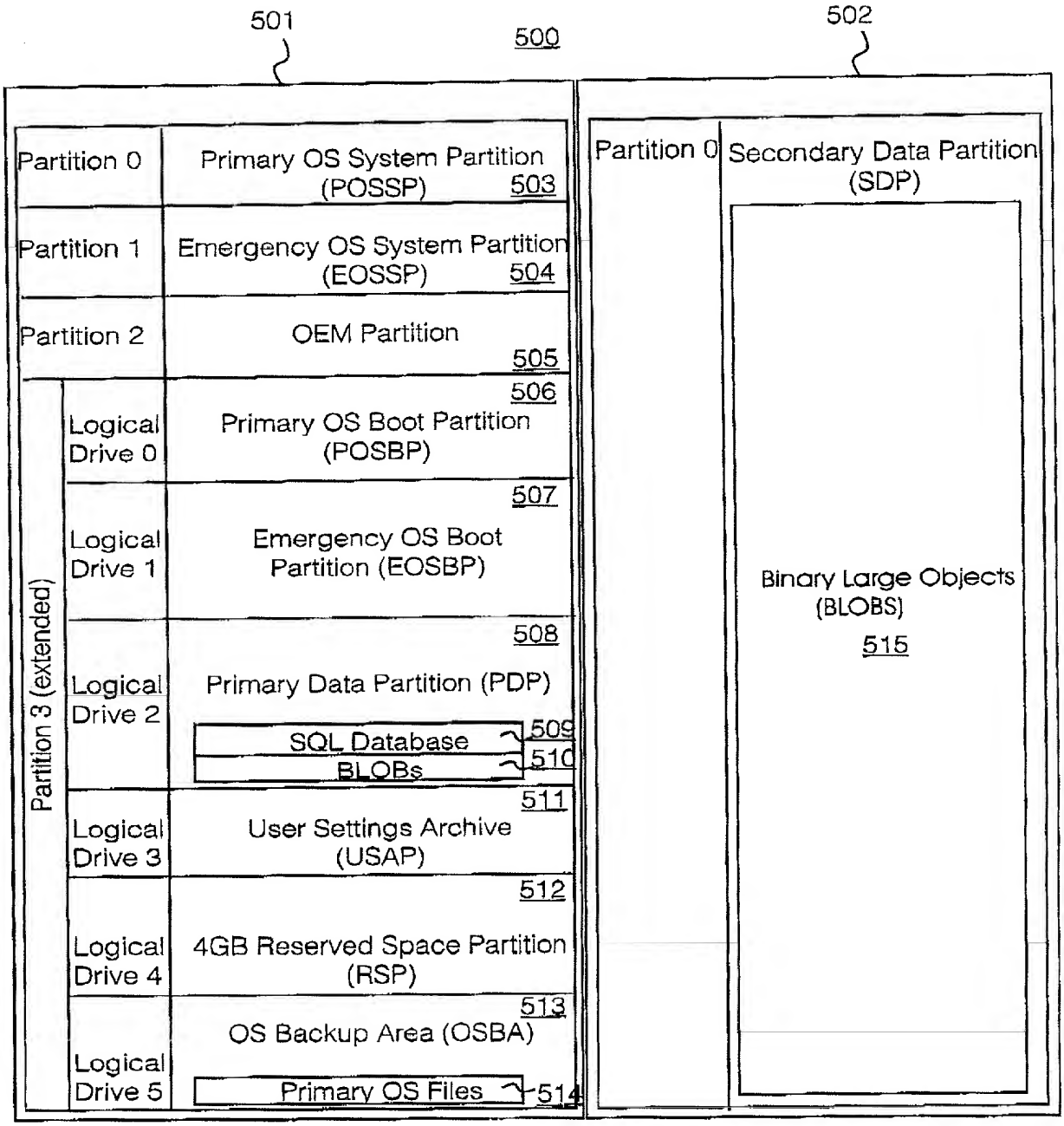
501
500
502
Partition 0
Primary OS System Partition (POSSP) 503
Partition 1
Emergency OS System Partition (EOSSP) 504
Partition 2
OEM Partition 505
Partition 3 (extended)
Logical Drive 0
506
Primary OS Boot Partition (POSBP)
Logical Drive 1
507
Emergency OS Boot Partition (EOSBP)
Logical Drive 2
508
Primary Data Partition (PDP)
SQL Database 509
BLOBs 510
Logical Drive 3
511
User Settings Archive (USAP)
Logical Drive 4
512
4GB Reserved Space Partition (RSP)
Logical Drive 5
513
OS Backup Area (OSBA)
Primary OS Files 514
Partition 0
Secondary Data Partition (SDP)
Binary Large Objects (BLOBS)
515

Fig. 5

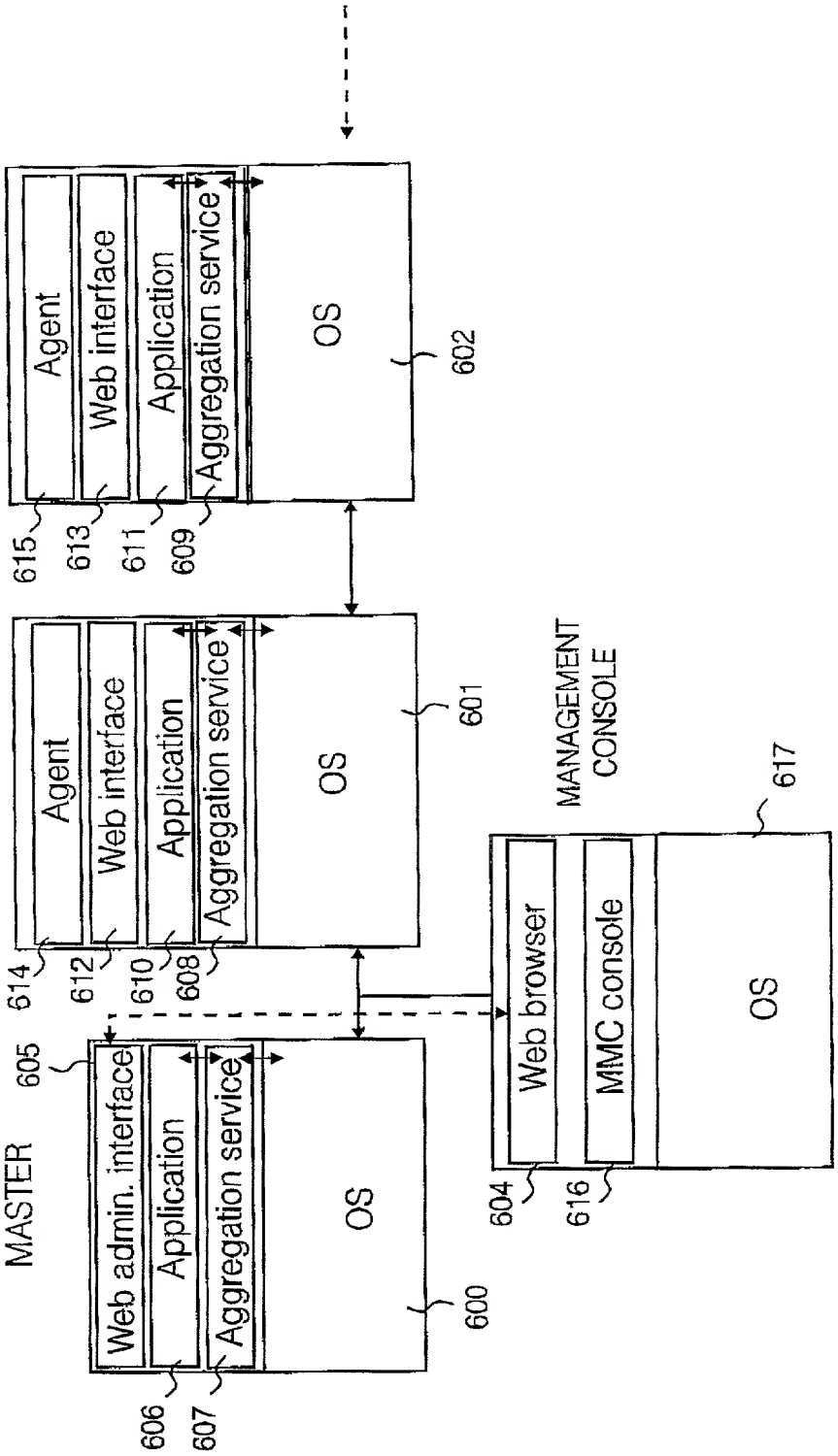
SLAVE
Agent
Web interface
Application
Aggregation service
OS
602
615
613
611
609
SLAVE
Agent
Web interface
Application
Aggregation service
OS
601
614
612
610
608
MASTER
Web admin. interface
Application
Aggregation service
OS
600
605
606
607
MANAGEMENT CONSOLE
Web browser
MMC console
OS
617
604
616

Fig. 6

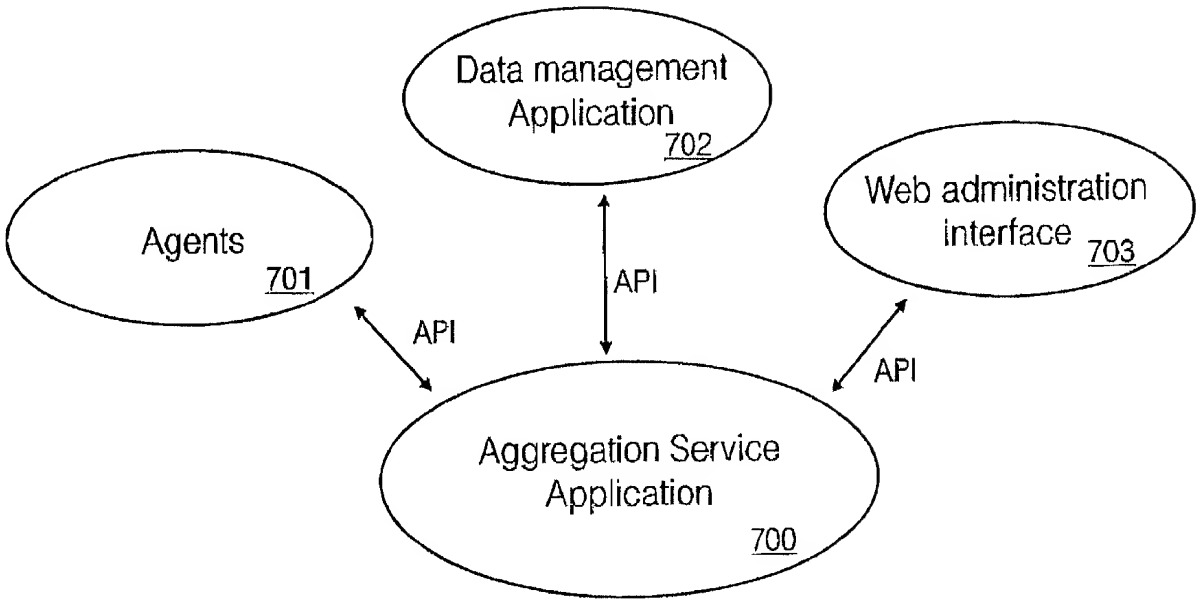
Data management Application
702
Agents
701
Web administration interface
703
API
API
API
Aggregation Service Application
700

Fig. 7

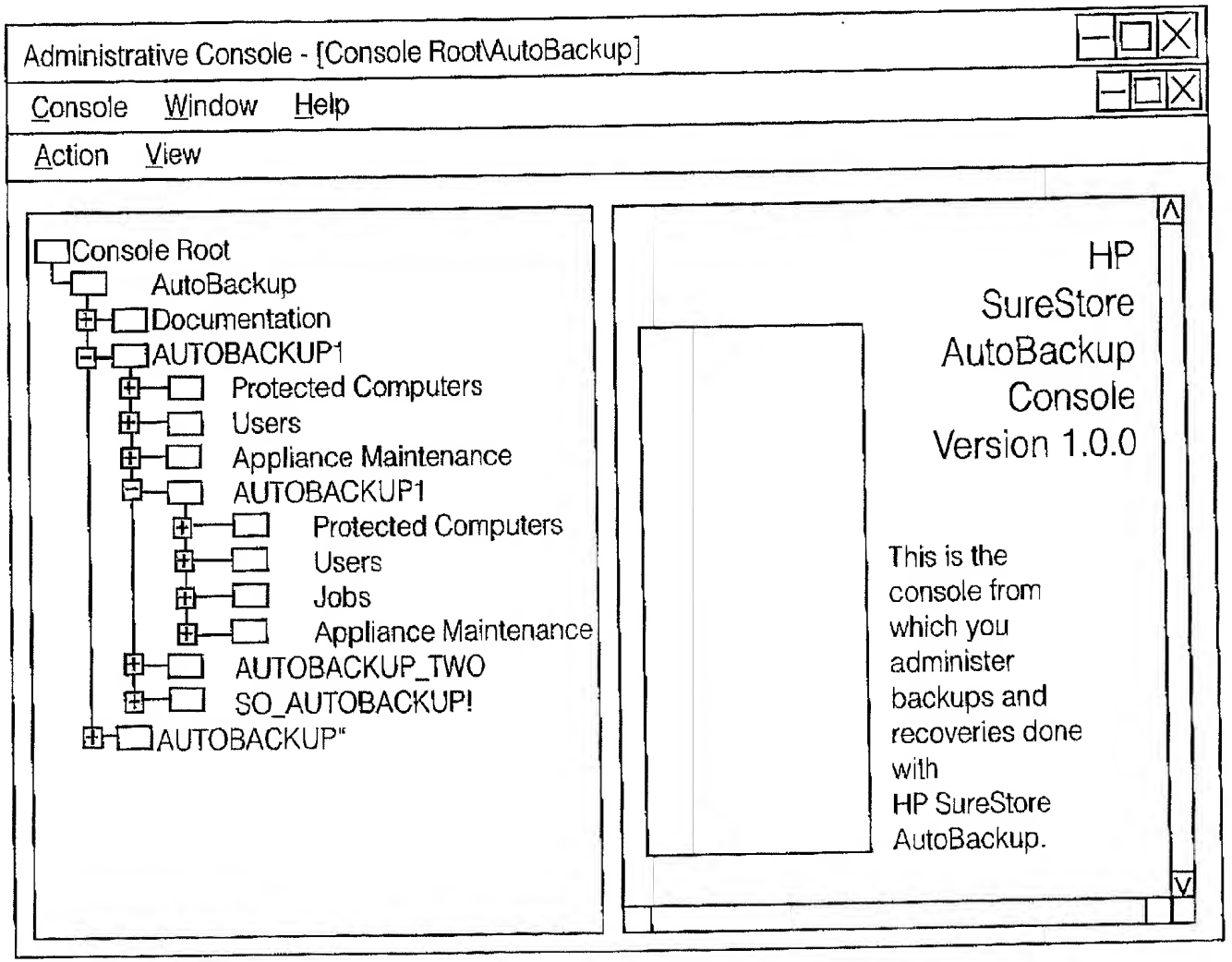
Administrative Console - [Console Root\AutoBackup]
Console Window Help
Action View
Console Root
AutoBackup
Documentation
AUTOBACKUP1
Protected Computers
Users
Appliance Maintenance
AUTOBACKUP1
Protected Computers
Users
Jobs
Appliance Maintenance
AUTOBACKUP_TWO
SO_AUTOBACKUP!
AUTOBACKUP"
HP
SureStore
AutoBackup
Console
Version 1.0.0
This is the console from which you administer backups and recoveries done with HP SureStore AutoBackup.

Fig. 8

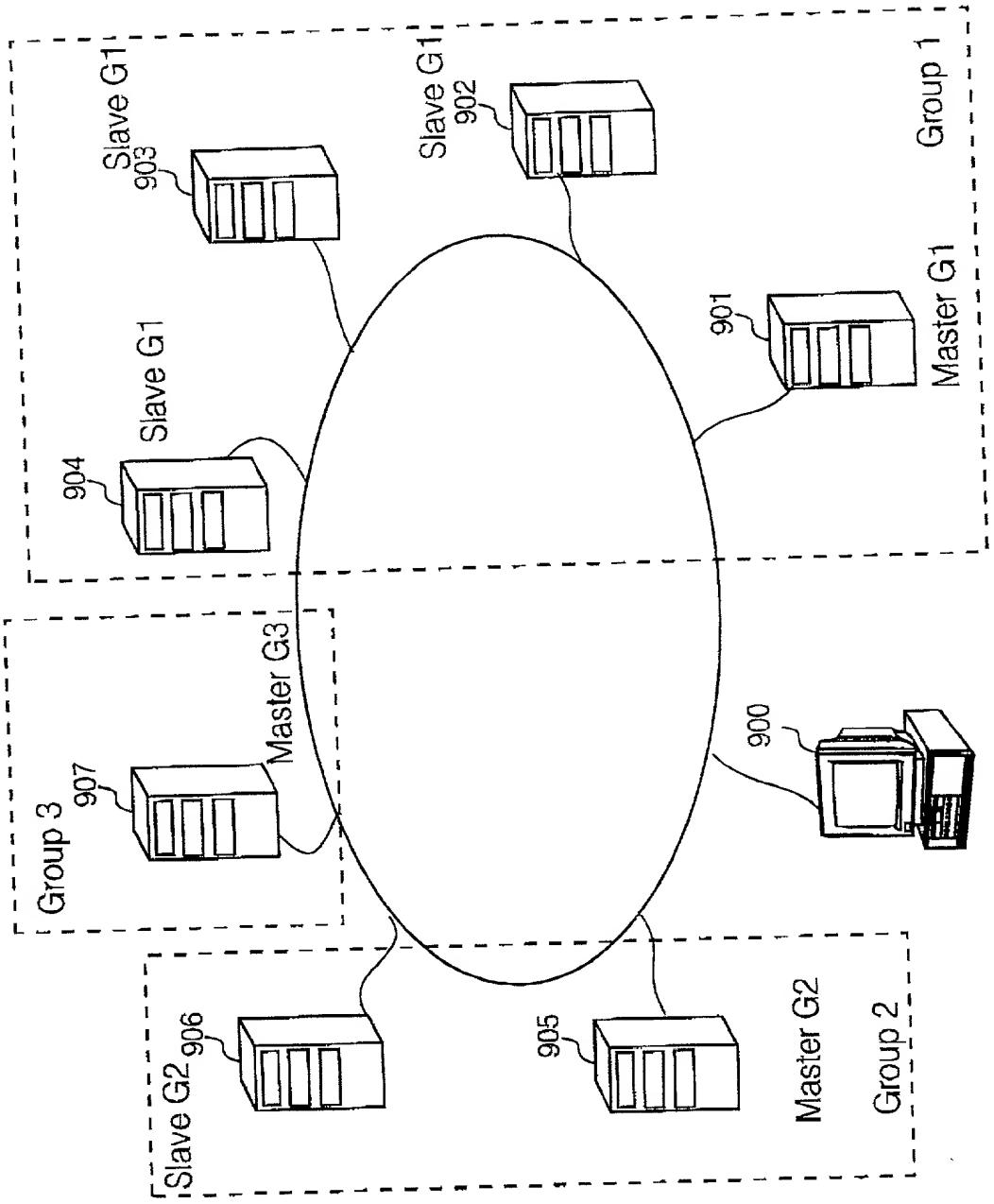
Group 1
Master G1
901
Slave G1
902
Slave G1
903
Slave G1
904
Group 2
Master G2
905
Slave G2
906
Group 3
Master G3
907
900

Fig. 9

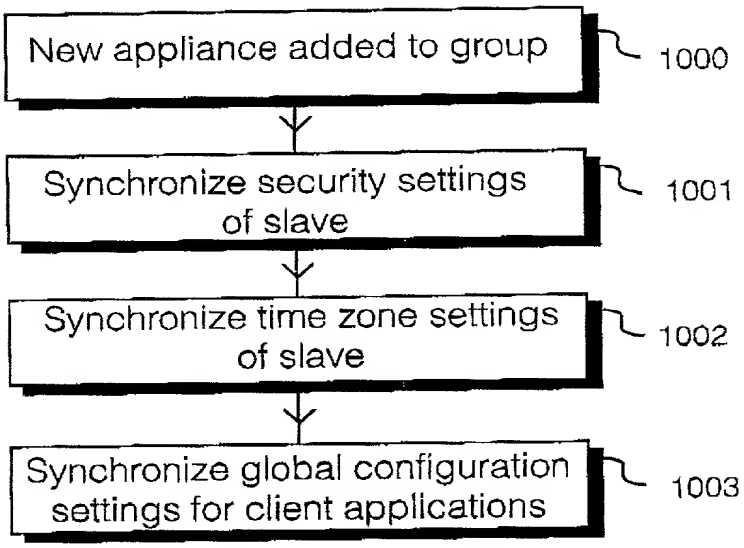
New appliance added to group
1000
Synchronize security settings of slave
1001
Synchronize time zone settings of slave
1002
Synchronize global configuration settings for client applications
1003

Fig. 10

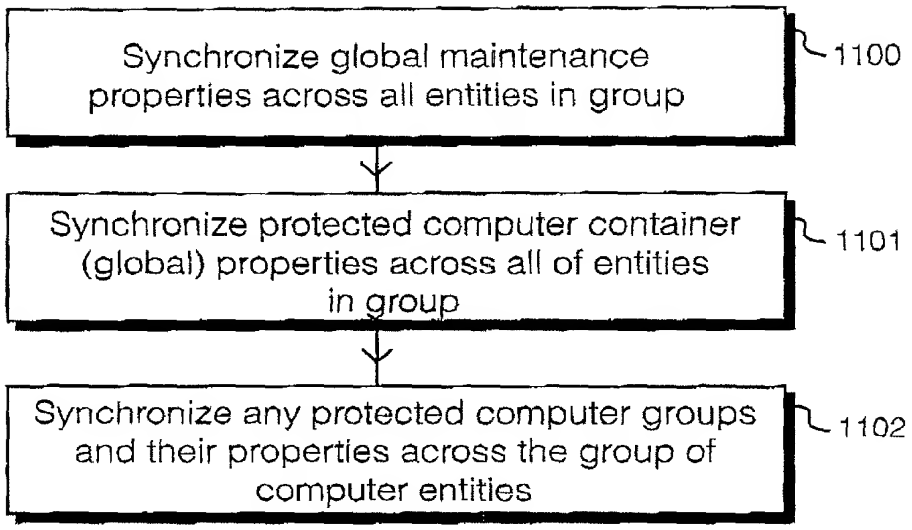
Synchronize global maintenance properties across all entities in group
1100
Synchronize protected computer container (global) properties across all of entities in group
1101
Synchronize any protected computer groups and their properties across the group of computer entities
1102

Fig. 11

Operation	Availability		Comment
	Master	Slave(s)	
Agent Operations			
Agent installation of New Account (account-balancing mode enabled)	Required	ALL	Master is required since load balancing requires the group member list, which is stored on master. All the slaves are required to enforce account uniqueness of new accounts
Agent Re-installation of Existing Account(account-balancing mode enabled)	Required	ALL	If master is offline, then the only accounts shown in the re-installation list are those on the appliance which provided the Agent Setup URL
Agent Installation of New Account (account-balancing mode disabled)	The appliance which provides the Agent Setup URL		Appliances in the group act as standalone for Agent Setup when account-balancing is disabled
Agent Re-Installation of Existing Account (account-balancing mode enabled)	The appliance which provides the Agent Setup URL		Appliances in the group act as standalone for Agent Setup when account-balancing is disabled
Agent Uninstallation (with Account Delete)		The slave that hosts the account data	Master is NOT required since group level user/protected computer list is dynamically created
Client backup/restore operations		The slave that hosts the account data	
User changes schedule, or retention, or excludes via AutoBackup Options tabs		The slave that hosts the account data	

Fig. 12

Document: 0025425.0454

Group Administration using MMC Console			
Creating a new appliance group	Required		
Deleting a group	Required	ALL	
Adding a new slave	Required	The slave that is being added	
Removing a slave	Required	The slave that is being removed	
Adding group into MMC Console	Required		
Changing any group- level appliance maintenance settings	Required		Includes scheduled backup job throtting, retention job, integrity job, weekly email status report, and daily email status report.
Configuring Protected Computer Properties	Required	The slave that hosts the account data	Group-level user/protected computer list is dynamically created
Account Deleton (via MMC)	Required	The slave that hosts the account data	
Adding/removing Protected	Required		Note these options are disabled at the appliance level
Protected Computer Properties	Required		Note these options are disabled at the appliance level
Adding/Removing Computer in Protected Computer Group	Required	The slave that hosts the account data	Note these options are disabled at the appliance level

Fig. 13

Administration using WEB Admin UI			
Configuring Protected Computer Properties		The slave that hosts the agent data	
Account Deletion (via WAP)		The slave that hosts the agent data	Master is NOT required since group-level user/protected computer list is dynamically created
Changing security mode	Required		Each slave re-directs this page to the master
Changing master network	Required		Note the same restrictions apply when changing network configuration via emergency reset sequence
Changing slave network settings	Required	The slave that is being configured	Note the same restrictions apply when changing network configuration via emergency reset sequence

Fig. 14

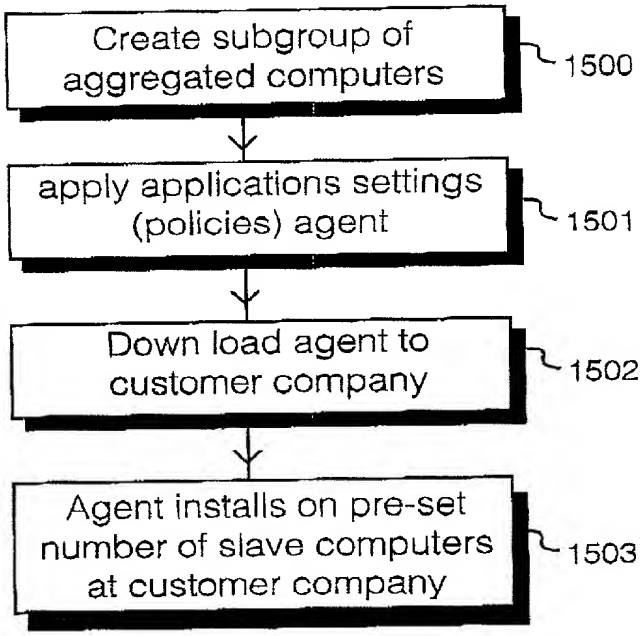
Create subgroup of aggregated computers
1500
apply applications settings (policies) agent
1501
Down load agent to customer company
1502
Agent installs on pre-set number of slave computers at customer company
1503

Fig. 15

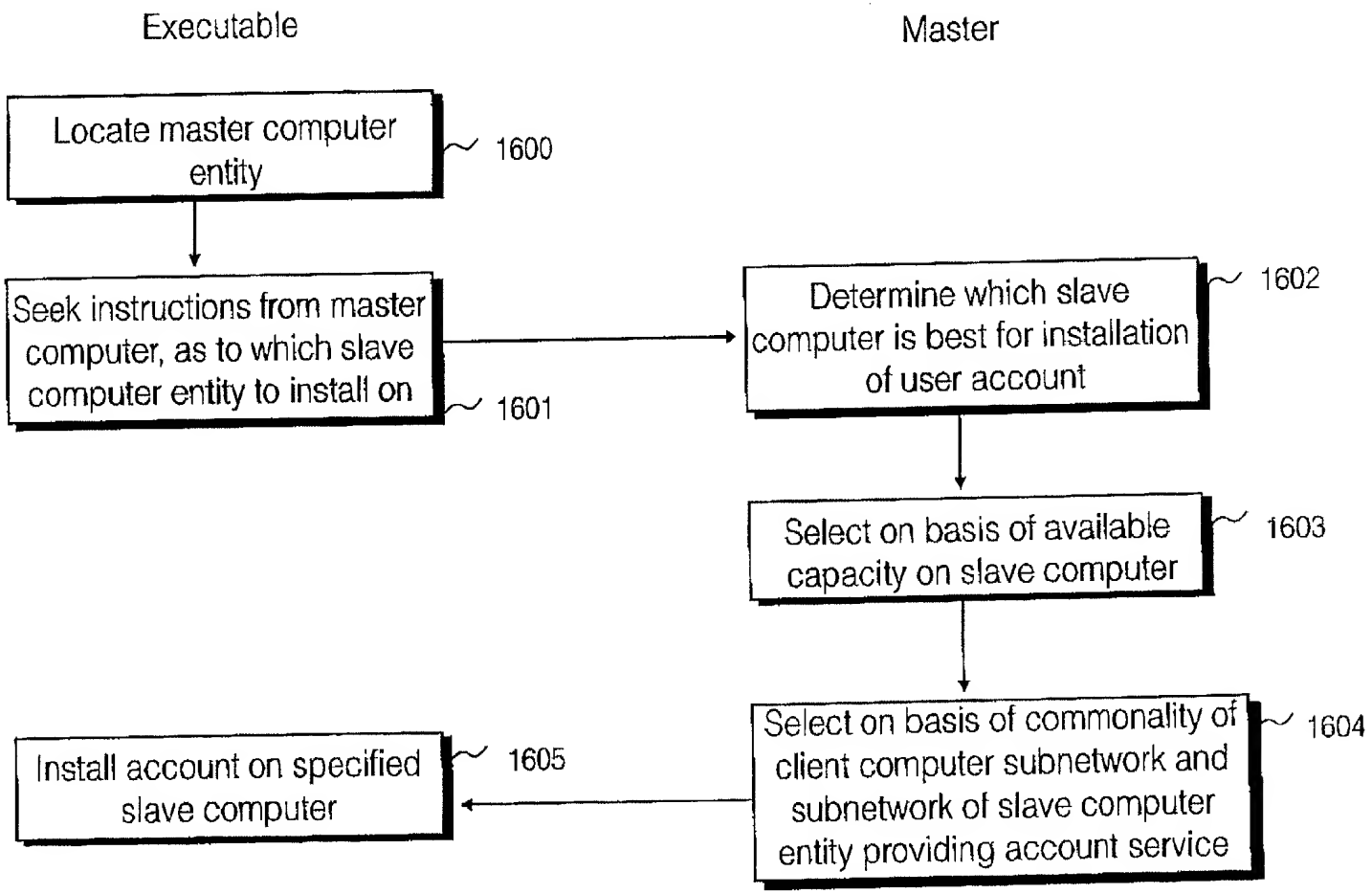
Executable
Master
Locate master computer entity
1600
Seek instructions from master computer, as to which slave computer entity to install on
1601
Determine which slave computer is best for installation of user account
1602
Select on basis of available capacity on slave computer
1603
Select on basis of commonality of client computer subnetwork and subnetwork of slave computer entity providing account service
1604
Install account on specified slave computer
1605

Fig. 16

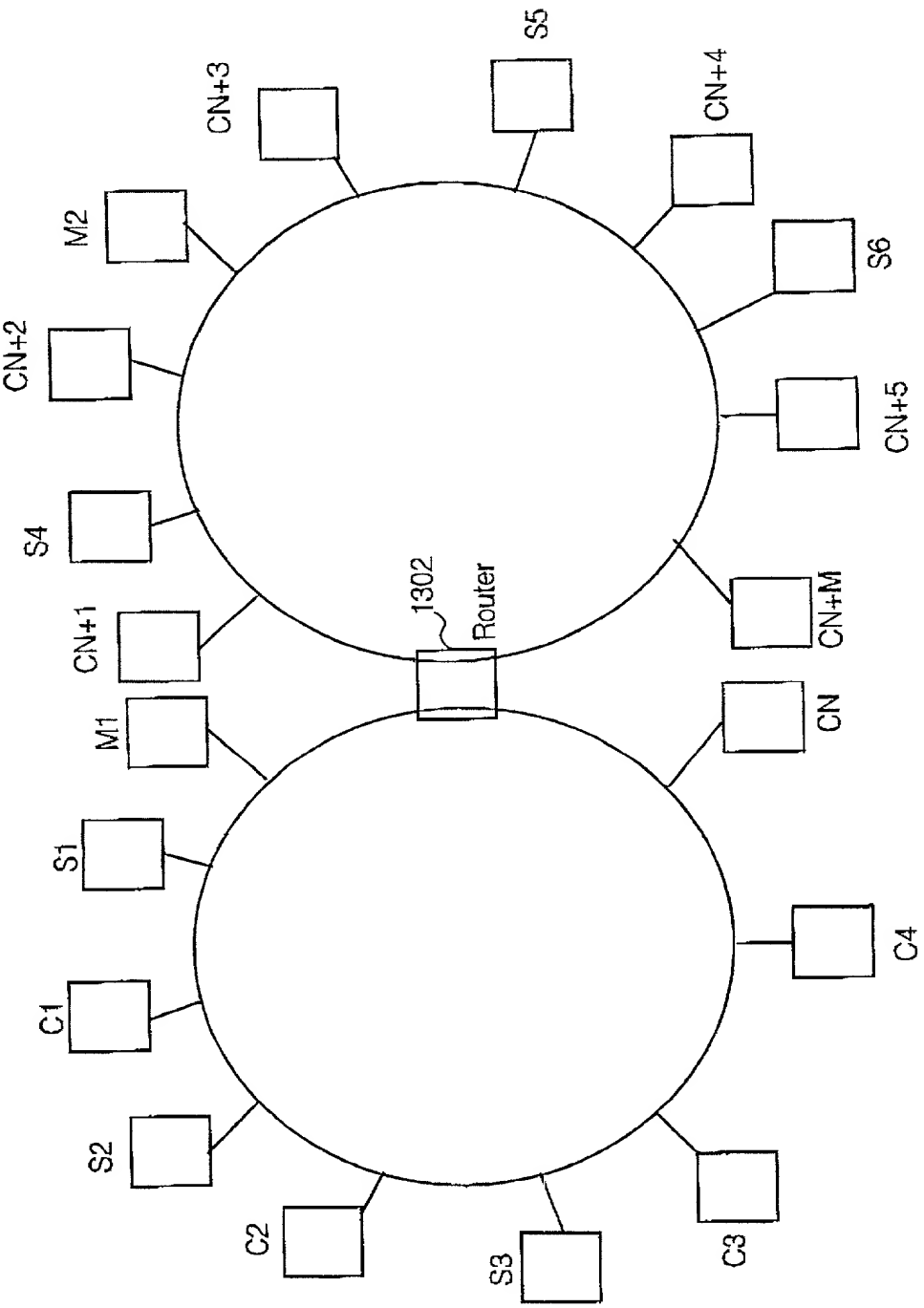
1302
Router
C1
C2
C3
C4
S1
S2
S3
S4
S5
S6
M1
M2
CN
CN+1
CN+2
CN+3
CN+4
CN+5
CN+M

Fig. 17

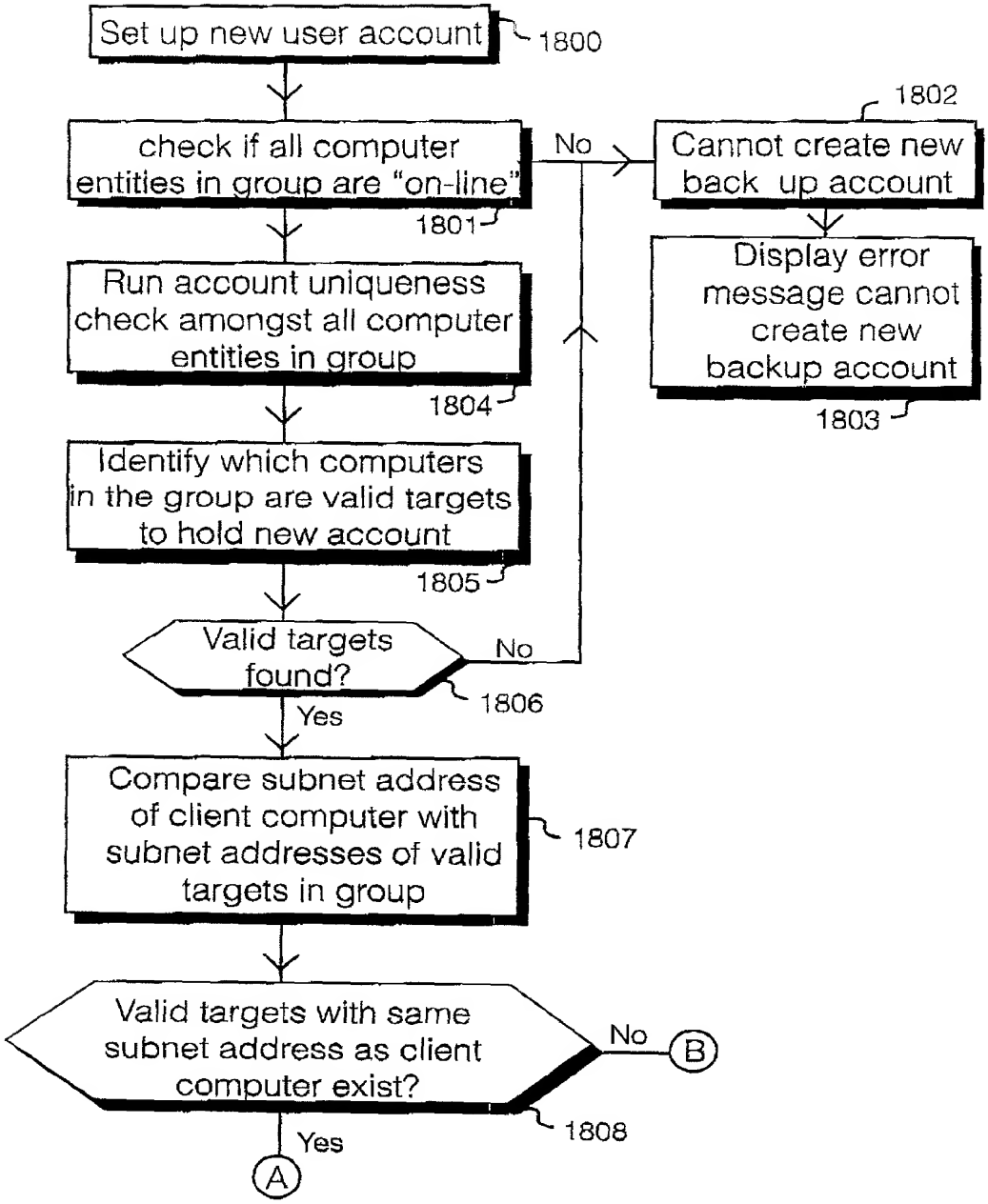
Set up new user account
1800
check if all computer entities in group are "on-line"
1801
No
1802
Cannot create new back up account
Display error message cannot create new backup account
1803
Run account uniqueness check amongst all computer entities in group
1804
Identify which computers in the group are valid targets to hold new account
1805
Valid targets found?
1806
No
Yes
Compare subnet address of client computer with subnet addresses of valid targets in group
1807
Valid targets with same subnet address as client computer exist?
1808
No
B
Yes
A

Fig. 18a

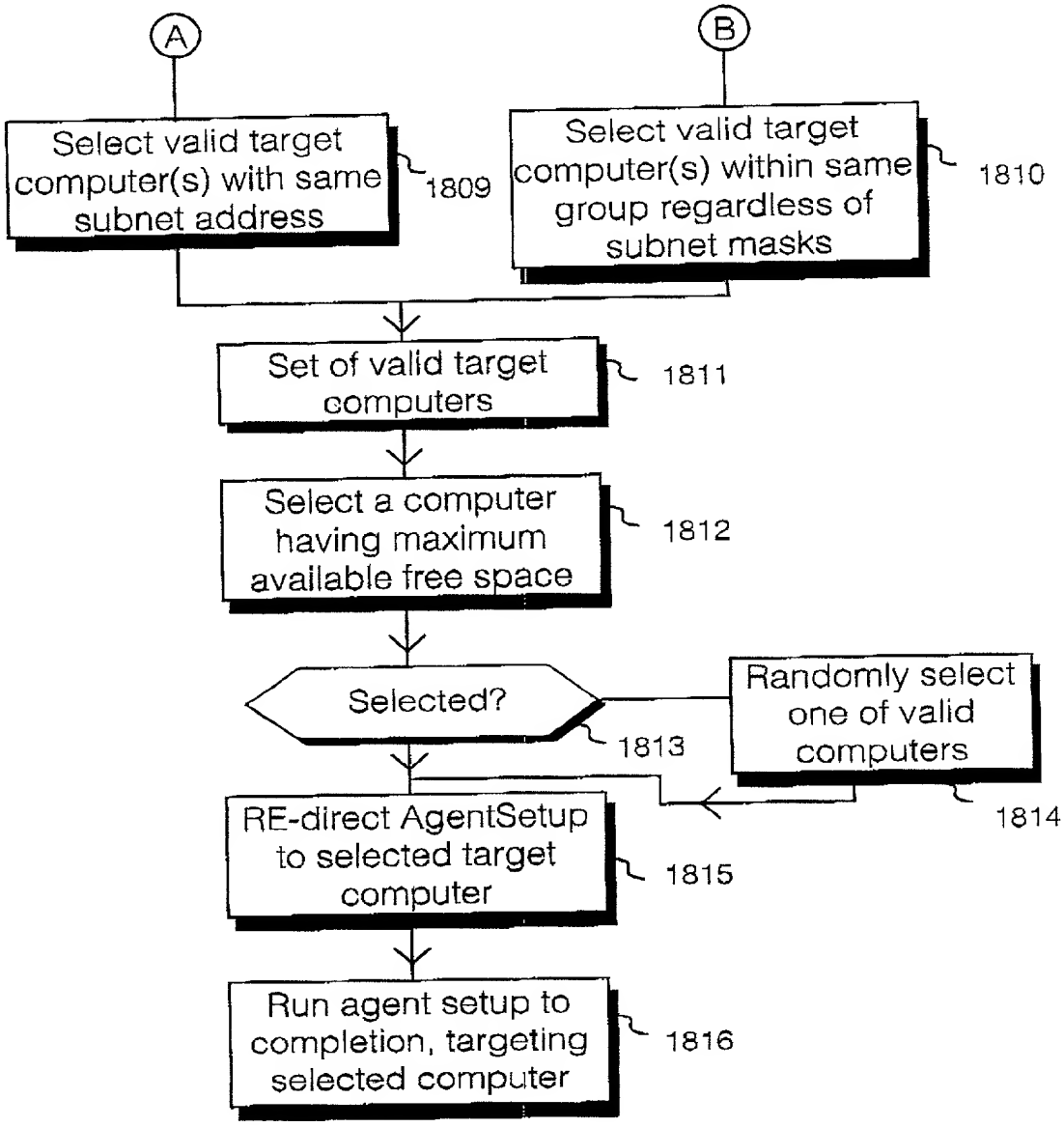
A
B
Select valid target computer(s) with same subnet address
1809
Select valid target computer(s) within same group regardless of subnet masks
1810
Set of valid target computers
1811
Select a computer having maximum available free space
1812
Selected?
1813
Randomly select one of valid computers
1814
RE-direct AgentSetup to selected target computer
1815
Run agent setup to completion, targeting selected computer
1816

Fig. 18b

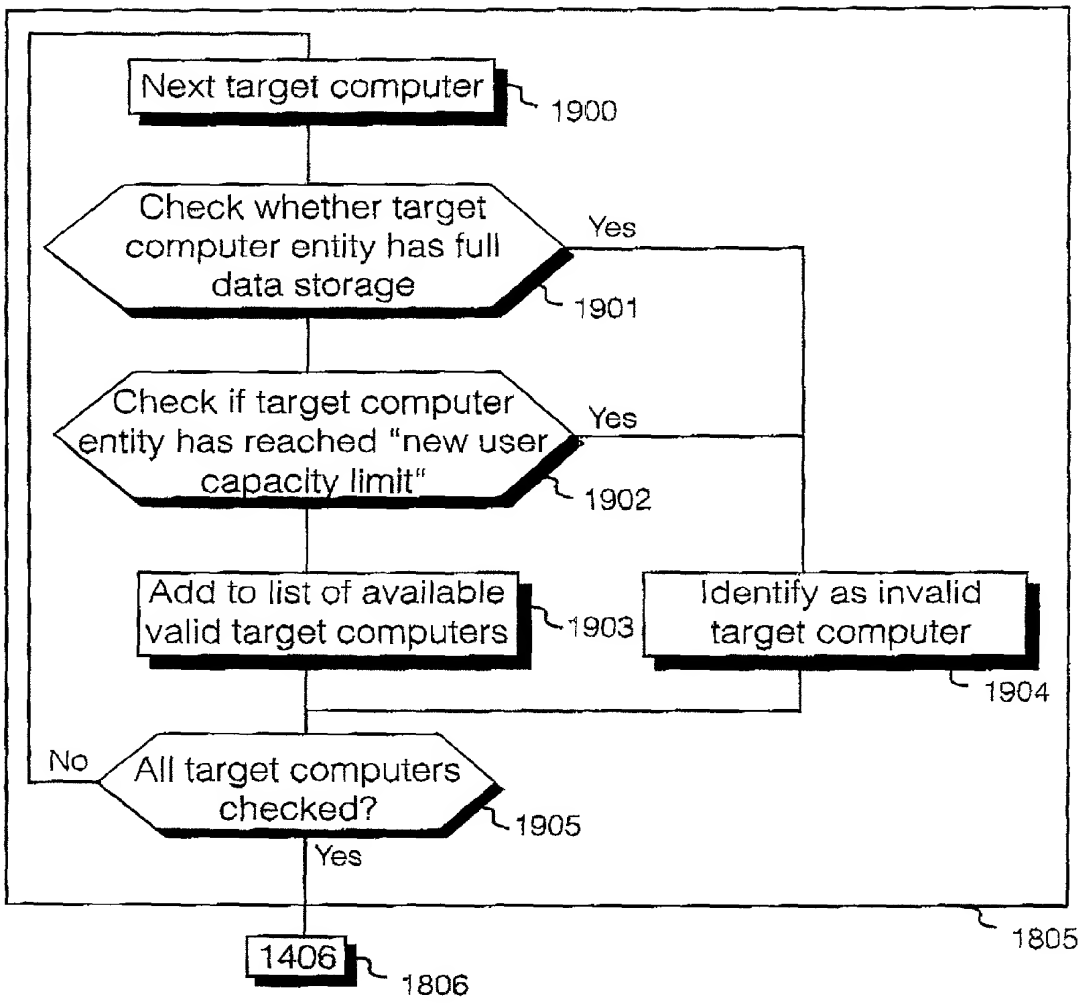
Next target computer
1900
Check whether target computer entity has full data storage
Yes
1901
Check if target computer entity has reached "new user capacity limit"
Yes
1902
Add to list of available valid target computers
1903
Identify as invalid target computer
1904
No
All target computers checked?
1905
Yes
1406
1806
1805

Fig. 19

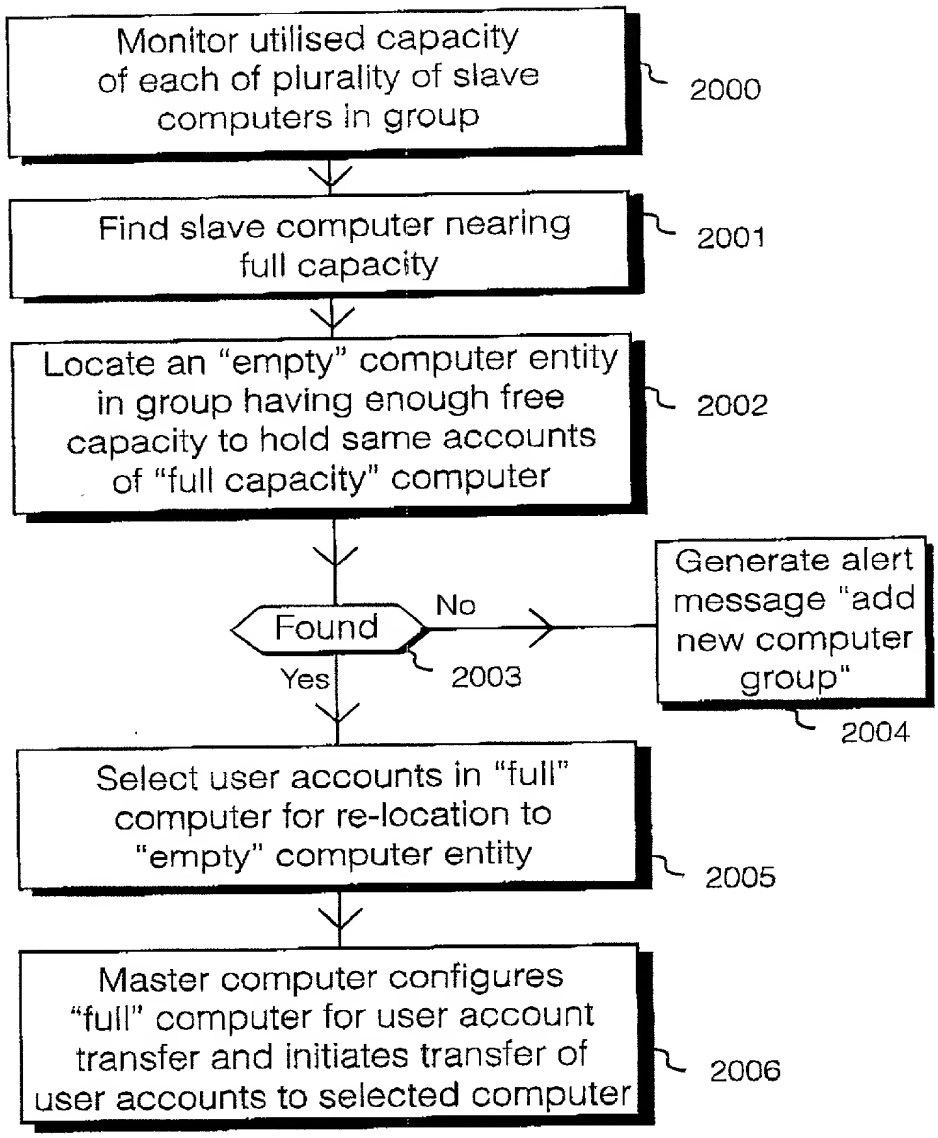

Fig. 20

TOTAL P.76